

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312093

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-CA08-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312093
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-RDP-CA08-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.08" ACRYLIC SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2529.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

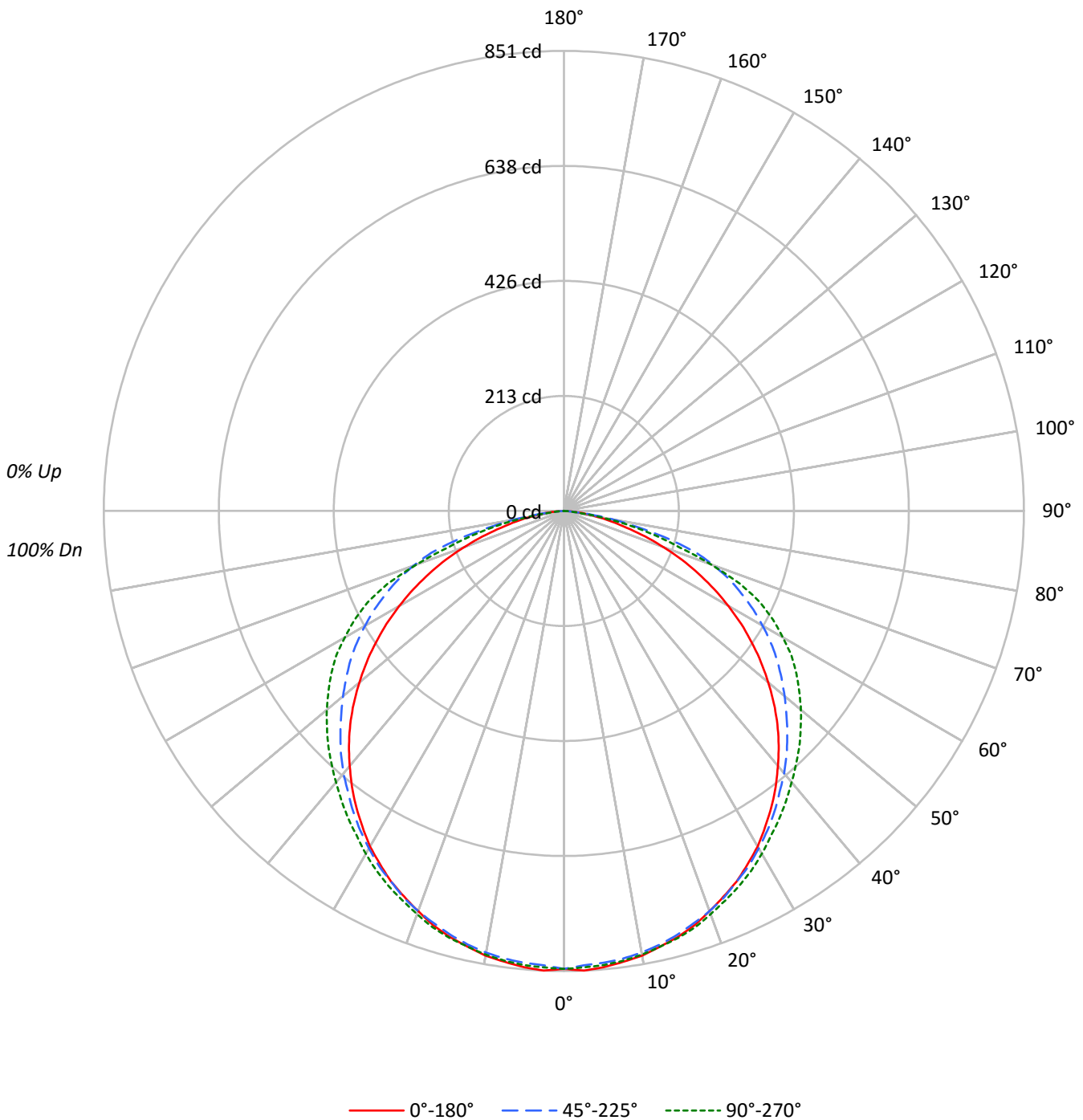
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2279	2279	2279
5°	2288	2267	2277
10°	2282	2266	2277
15°	2272	2261	2277
20°	2256	2256	2273
25°	2245	2245	2275
30°	2227	2239	2276
35°	2199	2231	2283
40°	2164	2226	2303
45°	2127	2224	2344
50°	2066	2232	2397
55°	1992	2260	2464
60°	1891	2285	2518
65°	1747	2313	2552
70°	1553	2330	2283
75°	1252	2094	1827
80°	979	1469	1193
85°	670	426	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	3.2
10°-20°	230.0	9.1
20°-30°	350.2	13.8
30°-40°	426.6	16.9
40°-50°	452.6	17.9
50°-60°	427.1	16.9
60°-70°	344.9	13.6
70°-80°	187.1	7.4
80°-90°	30.3	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	660.4	26.1
0°-40°	1087.0	43.0
0°-60°	1966.8	77.8
0°-90°	2529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2529.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	847	845	839	845	843	80
15°	815	814	812	817	817	230
25°	756	754	756	764	766	348
35°	669	673	679	693	695	418
45°	559	567	584	606	616	430
55°	424	442	482	513	525	379
65°	274	308	363	393	401	272
75°	120	176	201	182	176	132
85°	22	24	14	12	10	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	847.0	847.0	847.0	847.0	847.0
2.5°	851.0	847.0	841.1	847.0	845.1
5°	847.0	845.1	839.1	845.1	843.1
7.5°	841.1	841.1	835.2	839.1	839.1
10°	835.2	833.2	829.3	835.2	833.2
12.5°	825.3	823.3	821.4	827.3	825.3
15°	815.4	813.5	811.5	817.4	817.4
17.5°	803.6	801.6	799.6	807.5	807.5
20°	787.8	787.8	787.8	795.7	793.7
22.5°	772.0	772.0	774.0	781.9	779.9
25°	756.2	754.2	756.2	764.1	766.1
27.5°	736.5	738.4	740.4	748.3	750.3
30°	716.7	718.7	720.7	730.5	732.5
32.5°	693.0	697.0	700.9	712.8	712.8
35°	669.3	673.3	679.2	693.0	695.0
37.5°	643.7	647.6	655.5	671.3	675.3
40°	616.0	621.9	633.8	649.6	655.5
42.5°	588.4	596.3	610.1	627.9	635.8
45°	558.8	566.7	584.4	606.1	616.0
47.5°	527.2	537.0	558.8	586.4	594.3
50°	493.6	507.4	533.1	562.7	572.6
52.5°	460.0	475.8	507.4	539.0	548.9
55°	424.5	442.3	481.8	513.3	525.2
57.5°	389.0	408.7	454.1	487.7	499.5
60°	351.4	375.1	424.5	458.1	467.9
62.5°	313.9	341.6	394.9	428.4	436.3
65°	274.4	308.0	363.3	392.9	400.8
67.5°	236.9	276.4	331.7	353.4	353.4
70°	197.4	240.9	296.2	302.1	290.2
72.5°	158.0	207.3	256.7	235.0	225.1
75°	120.4	175.7	201.4	181.6	175.7
77.5°	90.8	142.2	142.2	130.3	126.4
80°	63.2	108.6	94.8	82.9	77.0
82.5°	41.5	61.2	49.4	39.5	33.6
85°	21.7	23.7	13.8	11.8	9.9
87.5°	7.9	3.9	2.0	3.9	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)